In the Claims:

The claims and their status are shown below.

1. (Original) An isolated antisense oligonucleotide consisting essentially of 10 to 50 nucleotides, wherein said oligonucleotide specifically hybridizes within an accessible region of TRPC4 mRNA, said region defined by nucleotides 43 through 86, 325 through 342, 438 through 461, 624 through 641, 928 through 949, 1123 through 1132, 1190 through 1209, 1433 through 1450, 1806 through 1824, 2313 through 2331, 2499 through 2512, or 2855 through 2875 of SEQ ID NO:1, and wherein said oligonucleotide inhibits the production of TRPC4.

2. (Original) A composition comprising the isolated antisense oligonucleotide of claim 1.

3. (Original) The composition of claim 2, wherein said composition comprises a plurality of isolated antisense oligonucleotides, wherein each antisense oligonucleotide specifically hybridizes within a different accessible region.

4. (Original) A nucleic acid construct comprising a regulatory element operably linked to a nucleic acid encoding a transcript, wherein said transcript specifically hybridizes within one or more accessible regions of TRPC4 mRNA in its native form.

5. (Original) A host cell comprising the nucleic acid construct of claim 4.

6. (Original) A method of decreasing production of TRPC4 in cells or tissues, comprising contacting said cells or tissues with an antisense oligonucleotide that specifically hybridizes within an accessible region of TRPC4.

7. (Original) An isolated antisense oligonucleotide that specifically hybridizes within an accessible region of TRPC4 mRNA in its native form, wherein said antisense oligonucleotide inhibits the production of TRPC4.

8. (Original) A method for modulating pain in a mammal, said method comprising administering the isolated antisense oligonucleotide of claim 7 to said mammal.

9. (Original) A method of identifying a compound that modulates pain in a mammal, the method comprising:

contacting cells comprising a TRPC4 nucleic acid with a compound; and

detecting the amount of TRPC4 RNA or TRPC4 polypeptide in or secreted from said cell,

wherein a difference in the amount of TRPC4 RNA or TRPC4 polypeptide in the presence of said compound compared to the amount of TRPC4 RNA or TRPC4 polypeptide produced in the absence of said compound is an indication that said compound modulates pain in said mammal.

10. (Original) The method of claim 9, wherein the amount of said TRPC4 RNA is determined by Northern blotting.

11. (Original) The method of claim 9, wherein the amount of said TRPC4 polypeptide is determined by Western blotting.

12. (Original) The method of claim 9, wherein said compound is an antisense oligonucleotide that specifically hybridizes within an accessible region of TRPC4 mRNA in its native form, wherein said antisense oligonucleotide inhibits production of TRPC4.

13. (Original) A method for modulating pain in a mammal, said method comprising administering a compound to said mammal, wherein said compound modulates the expression of TRPC4.

14. (Original) The method of claim 13, wherein said compound is an antisense oligonucleotide that specifically hybridizes within an accessible region of TRPC4 mRNA in its native form, wherein said antisense oligonucleotide inhibits production of TRPC4.

15. (Original) The method of claim 13, wherein said pain is from diabetic neuropathy, postherpetic neuralgia, fibromyalgia, surgery, or chronic back pain.